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NAVENVIRHLTHCENNOTE 3501
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NAVENVIRHLTHCEN NOTICE 3501

Subj: CONCEPT OF OPERATIONS (CONOPS) FOR THE FORWARD DEPLOYABLE PREVENTIVE MEDICINE UNITS (FDPMU)

Encl: (1) Concept of Operations (CONOPS) for the Forward Deployable Preventive Medicine Units (FDPMU) Executive Summary

1. Purpose. To issue the Concept of Operations for the Forward Deployable Preventive Medicine Units. This notice contains significant changes and should be read in its entirety.

2. Discussion. Forward Deployable Preventive Medicine Units (FDPMU) provide specialized preventive medicine support to CONUS contingencies, forward deployed U.S. forces and Joint Task Force Commanders. These units are composed of highly trained and skilled personnel, capable of meeting Force Health Protection requirements ranging from small-scale humanitarian support to Major Theater Wars. Personnel to support these units are drawn primarily from worldwide Navy Environmental Health Center (NAVENVIRHLTHCEN) assets. Enclosure (1) provides detailed discussion on the overall concept of operations, responsibilities and mission; team composition and individual component staffing, functions and capabilities; command and control, and the administrative and logistical support required.

3. Action. All NAVENVIRHLTHCEN and Echelon 5 military personnel will familiarize themselves with the provisions of this notice.

4. Cancellation Contingency. This notice will remain in effect until cancelled or superseded.

D. A. HILAND

Distribution:
(NAVENVIRHLTHCENINST 5215.2Q)
List VI, VII, VIII

CONCEPT OF OPERATIONS (CONOPS) FOR THE FORWARD DEPLOYABLE PREVENTIVE MEDICINE UNITS (FDPMU) EXECUTIVE SUMMARY

The Navy Forward Deployable Preventive Medicine Unit (FDPMU) provides specialized preventive medicine support to CONUS contingencies, forward deployed U. S. forces and Joint Task Force (JTF) Commanders. The FDPMU is typically assigned to the JTF, Marine Expeditionary Force, or Combatant Commander's Force Surgeon. Their unique capabilities make a significant contribution to the overall Force Health Protection (FHP) effort in terms of force multiplier while it represents an important asset to the Theater Commander.

These units are staffed by highly trained personnel including preventive medicine officers (epidemiologists), microbiologists, environmental health officers, industrial hygiene officers, entomologists, medical laboratory and preventive medicine technicians, and general duty corpsmen drawn from the Navy Environmental Health Center and its worldwide field activities. The FDPMU has the capability, and flexibility to meet any force health protection contingency from small-scale humanitarian support to warfighting missions, including regional and major theater wars. The FDPMU will be deployed as a task-organized preventive medicine unit composed of one or more of its four primary components (see Section 3).

The FDPMU has substantial lift and transport requirements, deploying with over 15,000 pounds of equipment and nearly 70,000 pounds of organic ground transportation. Vital to the team's mission is state-of-the-art detection and diagnostic equipment that enables "real-time" in-theater analytical and assessment capability. This advanced technology provides detection and reporting capabilities for environmental contaminants, physical agents, diseases, pathogens, disease vectors, and chemical, biological and radiological contamination as close to the source as possible. In doing so, the FDPMU enhances decision superiority and aides the operational commander in better protecting the health of his force.

All requests for FDPMU deployment require validation by OPNAV N931, which determines the requirements of the supported commands and means to satisfy such requirements. If validated, the Chief of Naval Operations, Code N931, will facilitate issuance of deployment orders (DEPORD) to the Navy Surgeon General to provide the requested support. The DEPORD will generally include a mission statement, concept of operations, force health protection requirements, and link-up and reporting instructions. After receipt of the DEPORD, the team deploys within 96 hours using military and non-military transportation assets to rapidly arrive in-theater. The FDPMU does not require a large operational footprint (light in configuration). It is flexible and can be specifically organized and equipped to meet wide-ranging mission support requirements, including employment of portable equipment with sustainment capability for up to 30 days. The FDPMU is dependent on Base Operating Support and requires integration with command, control, communications, and computer capabilities to ensure mission success. The FDPMU is not an incident response force, but rather a highly skilled FHP technical unit specializing in all-hazards detection and health risk analysis.

Comprehensive planning and secure funding are necessary to ensure and maintain optimum team readiness. Newly assigned members typically receive an intensive six-month training cycle which includes introduction and extensive hands-on exposure to sensitive analytical instruments and diagnostic equipment. Ongoing planning and funding is required for individuals and teams to confront rapidly changing technology and equipment costs in order to maximize FHP.

1. INTRODUCTION

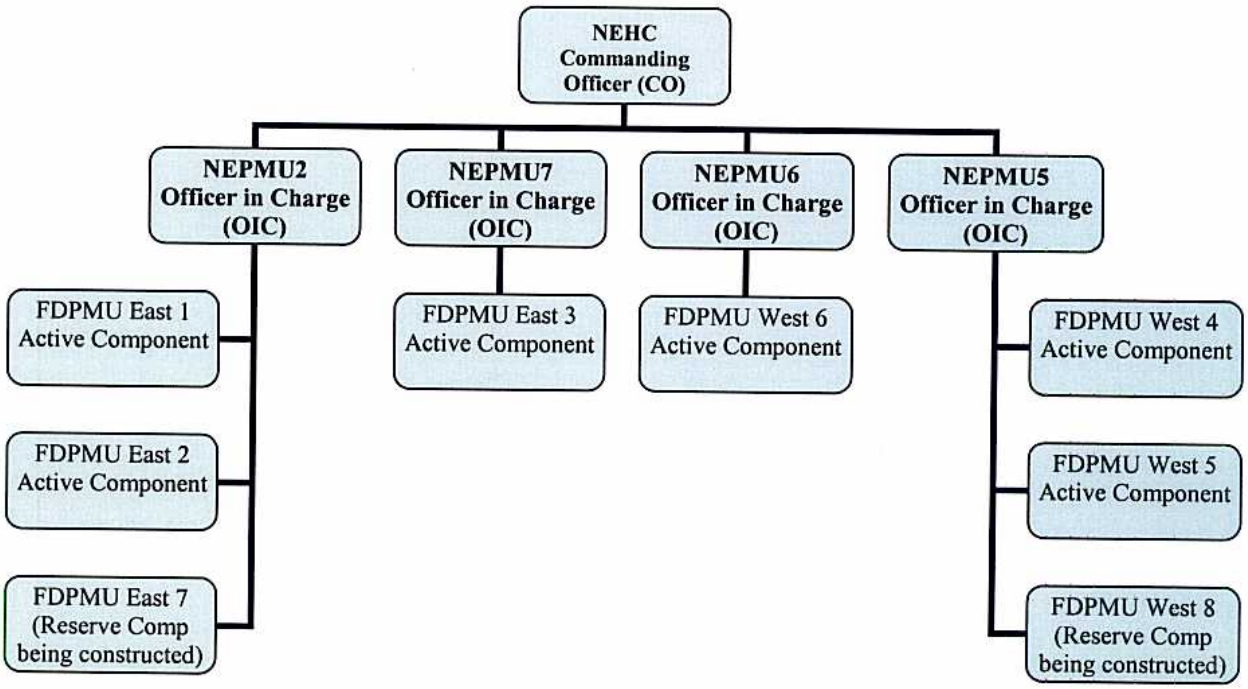
a. The Global War on Terrorism has significantly changed in the way health service support is provided to our military operational forces. Remote sustained deployments have increased in frequency over the recent years and smaller force structures have been instrumental in satisfying support requirements. To support Force Health Protection (FHP) concepts, medical assets must be configured to accommodate wide-ranging health promotion programs, provide for health risk assessment, and implement effective medical countermeasures. To optimize support of today's operational forces, medical assets must be smaller, agile, modular, flexible, rapidly deployable, and technologically advanced. Military medicine is reshaping its role in all aspects of health protection including transitioning to a "defensive system" against weapons of mass destruction. FDPMUs are fully capable of meeting these challenges.

b. The primary mission of the FDPMU is to rapidly assess, prevent, and control health threats in theaters of operations by threat characterization and enhancement of organic preventive medicine assets. This mission succinctly fits into DoD's concept for support of today's FHP vision and specifically, the second pillar – *"Prevention and Protection"*.

c. In February 2005, the FDPMU was officially recognized as a joint medical asset with the release of OPNAVINST 3501.347, Required Operational Capability (ROC) and Projected Operational Environment (POE). This progress is in direct support the Chief of Naval Operations (OPNAV N931) requirement that designated Bureau of Medicine and Surgery (BUMED) individuals and organizations develop and maintain specially organized, trained and equipped preventive medicine mobilization platforms - the FDPMU. In light of this milestone, the Navy Environmental Health Center (NEHC) has employed several strategies to further educate Joint Planners, Fleet Surgeons, Medical Planners and senior Navy Medicine leadership on the inherent capabilities of the FDPMU. This document addresses the mission, policies, and concept of operations required of the FDPMU in meeting any contingency from small scale humanitarian support to major theaters of war, including its adaptability to operate from fixed or mobile land bases as well as U.S. Navy Fleet platforms.

d. NEHC was designated as the Medical Program Manager for Deployment Medical Surveillance in June 1998. The inception of the FDPMU soon followed and has since become the primary vehicle for delivering robust FHP capabilities within a sound and effective deployment medical surveillance program. To meet staffing, training, equipping, and maintenance requirements of the FDPMU, the Navy Environmental and Preventive Medicine Units (NEPMU) were selected to house this enhanced preventive medicine capability. The mission of the NEPMU has traditionally been to provide direct preventive medicine and occupational health support to the Fleet and United States Marine Corps. With the advent of the FDPMU, the NEPMUs have since assumed a much greater role in on-going support and sustainment of expanded deployment operations.

e. The FDPMU is an inherent capability of NEPMU operations with NEHC continuing to function as the Program Manager, providing direction, oversight, and guidance to the cognizant NEPMU as appropriate. The world-wide NEHC command (as it relates to the FDPMU) is depicted in the following chart.



2. OVERVIEW

a. **Mission**. The primary mission of the FDPMU is to provide FHP by rapidly assessing, preventing and controlling health threats in a theater of operations and enhancing organic preventive medicine assets.

b. **Description**. The FDPMU is a joint service asset, assembled from world-wide NEHC Claimancy-18 assets that provide specialized preventive medicine support to both CONUS and forward deployed U.S. forces and Joint Task Force (JTF) Commanders. It is composed of highly trained personnel including preventive medicine officers (epidemiologists), microbiologists, environmental health officers, industrial hygiene officers, entomologist, advanced laboratory and preventive medicine technicians, and general duty corpsmen. The FDPMU is mobile and agile, and can be deployed within 96 hours of official notification when validated by OPNAV N931, issued a deployment order (DEPORD) and provided a mission statement. The FDPMU is designed with the flexibility that will enable NEHC to task-organize for meeting any contingency from small-scale humanitarian support to warfighting missions. It deploys with state-of-the-art detection and diagnostic equipment, yielding real-time analytical capabilities. The FDPMU requires Base Operating Support (BOS) and command, control, communications, and computer (C^4) integration with in-theater operating forces but does initially deploy with five days sustenance and a 30-day supply of consumables. Follow-on 30-day consumable push-packs are available for up to 120 days or until the Single Integrated Medical Logistics Management (SIMLM) is functional.

c. **Basic Configuration**. The FDPMU is a 13-member team composed of four primary components. Additional specialties can be augmented as necessary to meet specific mission objectives. The FDPMU will deploy as a task organized preventive medicine unit composed of one or more it's four primary components. Personnel normally assigned to individual components can be added or omitted to achieve task organization staffing requirements as dictated by the mission. FDPMUs are not designed or established, trained, funded or equipped as Level A first responders for conducting incident response operations within a potentially hazardous or chemical, biological, and radiological (CBR) contaminated hot (exclusion) zone.

FDPMU personnel are, however, trained and equipped to provide on-site cold zone expert analysis in support of first responders, e.g., Explosive Ordnance Disposal (EOD), Enhanced Nuclear, Biological, Chemical (ENBC), and hazardous material (HAZMAT) teams and to provide expert advice to incident commanders[1]. In addition, they can also provide expert reach-back analysis for all potential health threats detected.

d. **Operational Readiness**. NEHC currently staffs six active duty FDPMU teams, two each at the CONUS NEPMUs and 1 each assigned to the OCONUS NEPMUs. Two reserve FDPMU teams will be constructed with one operating from each CONUS NEPMU. These units will cycle through a three tiered, 18-month training and operational readiness rotation to cover each six month routine deployment phase, pre-routine deployment training phase, and post-deployment maintenance phase. Once constructed, reserve teams will be activated as needed for sustainment operations. Except for national contingency or major theater war events that require mass mobilization, teams will deploy on a rotating basis using the concepts of the Navy Medical Fleet Response Plan (MFRP) discussed below.

(1) Routine Deployable (Tier-I): Two FDPMU systems are consistently maintained in this status. The rotation plan will be staggered so two FDPMU manning sets will rotate on and off "Routine Deployable" status every six months. Upon completion of the rotation, the rotating FDPMU system will return to "Emergency Surge" status. Routine Deployable FDPMUs will be prepared to deploy task-organized FDPMU components as well as the full FDPMU within four days of notification.

(2) Surge Ready (Tier-II): Two active duty FDPMU systems are consistently maintained in this status. The "Surge Ready" FDPMU is in the pre-routine deployment training phase for six months prior to entering the Routine Deployable phase. A "Surge Ready" FDPMU will be able to deploy task-organized FDPMU components as well as a full FDPMU within 21 days of notification.

(3) Emergency Surge (Tier-III): The two FDPMU systems most recently released from a Routine Deployable status will be held in an Emergency Surge status for six months prior to reentering the training and operational readiness cycle. An "Emergency Surge" FDPMU will be able to deploy task-organized FDPMU components as well as a full FDPMU within 90 days of notification.

e. When validated by OPNAV N931 to deploy in support of CONUS requirements, the FDPMU can be embedded with the Joint Task Force – Maritime component or with Civil Support (JTF-CS) to provide DoD support to the lead federal agency. The FDPMU will follow specific occupational and environmental requirements of state and local agencies while under DoD command and control and work closely with the JTF Surgeon.

f. In addition to the U. S. response role of CONUS-based FDPMUs, the two OCONUS NEPMUs will maintain task organized FDPMU subsets or components to provide forward CBR analytical and Environmental Health Site Assessment capability. These FDPMU subsets will

[1] According to the Occupational Safety and Health Administration (OSHA) and Department of Labor, personnel who work in suspected or known contaminated areas must be protected. DoD and NAVOSH generally follow or adhere to the OSHA regulations (CFR 1910) that govern protection of personnel, including training and use of personal protective equipment. Level A refers to protection of personnel for dermal, ingestion, and respiratory routes and is especially suitable for confined space or areas suspected or known to contain high-level hazards.

provide AOR specific support. When capabilities are required beyond the scope of these subsets, additional FDPMU assets will be deployed from CONUS.

g. **Support**. The FDPMU provides deployed Force Health Protection as mandated by Title 10, Chapter 55 (Public Law 105-85, Section 768) and DODI 6490.3, Implementation and Application of Joint Medical Surveillance for Deployments:

(1) "It is the sense of Congress that the Secretary of Defense, in conjunction with the Chairman of the Joint Chiefs of Staff, should take such actions as are necessary to ensure that the units of the Armed Forces deployed in the theater of operations for each contingency operation or combat operation include specialized units with sufficient capability (including personnel with the appropriate training and expertise, and the appropriate equipment) to detect and monitor the presence of chemical, biological, and similar hazards to which members of the Armed Forces could be exposed in that theater during the operation."

(2) "The Surgeons General of the Military Departments shall support unique medical surveillance activities during deployment, including early deployment of specialized environmental and occupational exposure and epidemiology teams to assist the Theater or JTF Surgeon concerned in identifying and assessing threats, and recommending countermeasures to the Theater Commander."

h. **Force Health Protection Capabilities**. The FDPMU uses state-of-the-art technology to provide detection and reporting capabilities for environmental contaminants, diseases, pathogens, disease vectors, and chemical (including radionuclides) and/or biological agents far forward in order to enhance decision superiority. The FDPMU also:

(1) Integrates field laboratory analysis into the scientific assessment approach to characterize the battle space by detecting, identifying and evaluating environmental and occupational health hazards that include Toxic Industrial Chemicals/Toxic Industrial Materials (TIC/TIM), endemic disease threats, as well as, CBR agent contamination. It performs investigative biochemical and toxicological analyses, as well as, radiological health hazard analyses and assessments.

(2) Performs microbiological identification and characterization for both endemic pathogens and agents of biological warfare and terrorism (BW/BT) while also analyzing samples to assist in the treatment of biological and chemical casualties.

(3) Advises operational commanders concerning significant risks, operational risk management (ORM) alternatives and presents intervention recommendations to protect the health of the force using principles of risk communication, and risk mitigation and some elements of Consequence Management.

(4) Monitors the health of deployed forces and assesses adverse health outcome risks through aggressive medical surveillance, endemic and infectious disease assessment, performs epidemiological analysis, and implements disease vector surveillance and control measures. It performs serological testing related to diagnoses and prevention of infectious diseases and analyzes food items suspected of bacteriological contamination.

(5) Task-organizes a multi-disciplinary team from within its own resources when necessary to support military contingency operations, civil support programs, and humanitarian/disaster relief support missions.

(6) Provides comprehensive, continuous health risk surveillance, including collection, analysis, and recording of objectively determined health risks.

(7) Disseminates preventive medicine knowledge gained during deployments to maintain the health of the force and in preparing for future deployments.

(8) Identifies potential health threats, develops courses of action and advises commanders of the risks and threat countermeasures.

i. **Training**

(1) Timely and succinct training is essential to ensure optimum team readiness in support of mission execution. FDPMU training typically requires a six-month cycle for newly assigned members. Unit level training includes a competency-based and proficiency-driven approach that incorporates individual and component specific competencies into a team building concept. Phase One or the 'Basic Course' introduces team members to specific FDPMU procedures and policies, equipment didactic instruction and hands-on and problem solving, and culminates with a Tabletop Exercise. Phase Two or the 'Intermediate Course' consists of environmental sampling methodology for a deployment area operations and trains students on developing effective risk communication skills, and finally, Phase Three or the 'Operational Readiness Examination (ORE)' combines all aspects of the training syllabus into an objective deployment certification. Teams are challenged with scenario-based problems while actually training in a field environment. Participants are required to exercise all skills acquired during the six-month training cycle to solve deployment related problems and present relevant recommendations and countermeasures, as appropriate, to the operational commander. Performance measures are established to ensure objective criterion have been met.

(2) The FDPMU training program aligns with the Master Training Plan, it includes component specific task lists, Field Portable Analytical Equipment (FPAE) proficiency aptitude testing, specialty specific requirements as outlined in the FDPMU Navy Training Systems Plan (NTSP), and Battle Skills Training as well. The ongoing training sustainment concept requires a concerted effort to plan and fund for continuous individual and team focused training evolutions. This approach targets team and individual proficiencies to ensure knowledge and skill sets meet the newest technologies inherent to the FDPMU. Cross-training, in addition to on-the-job, unit level training, is emphasized to expedite member integration, promote continuity, establish trust and enhance team cohesiveness

3. TEAM COMPOSITION AND MANNING STRUCTURE

a. In its basic configuration the FDPMU is a 13-member team (5 officers and 8 enlisted) composed of four primary components, one subcomponent, and one support module. Components include the Preventive Medicine Component, Chemical Component (including the Radiological Subcomponent), Microbiology Component, Disease Vector Component, and the Logistics Support Module, which is inherent to each primary component.

b. Each component is coordinated by a team leader and deployable as a single unit/subset or may be combined in any combination with other components. This concept enables the JTF Commander to request the specific FDPMU is configured to meet mission needs and the anticipated health threats.

c. The basic configuration can be augmented as required by additional subject matter experts (SMEs), such as a Radiation Health Officer and/or a Biochemist, as indicated below. Team members are normally sourced from NEHC and its NEPMUs.

d. The typical manning structure for each component is described below:

(1) **Preventive Medicine Component**

(a) Preventive Medicine Officer (NOBC-0160)

(b) 1 Environmental Health Officer (NOBC-0861)

(c) 2 Preventive Medicine Technicians (NEC-8432)

(2) **Chemical Component**

(a) 1 Industrial Hygiene Officer (NOBC-0862)

(b) 2 Preventive Medicine Technicians (NEC-8432)

(c) 1 Biochemist (NOBC-0840) *available as augmentee only*

(3) **Radiological Subcomponent**

(a) 1 Industrial Hygiene Officer (NOBC-0862) *Chemical Component IHO dual-hatted*

(b) 1 Radiation Health Officer (NOBC-0845) *available as augmentee only*

(4) **Microbiology Component**

(a) 1 Microbiologist (NOBC-0841)

(b) 1 Medical Laboratory Technician (NEC-8506)

(c) 1 Biochemist (NOBC-0840) *available as augmentee only*

(5) **Disease Vector Component**

(a) 1 Entomologist (NOBC-0860)

(b) 2 Preventive Medicine Technicians (NEC-8432) *one also serves in the Logistics Support Module*

(6) **Logistics Support Module**

(a) 1 General Duty Corpsman (NEC-0000)

(b) 1 Preventive Medicine Technician (NEC-8432) *primary assignment is to the Disease Vector Component*

Weight - approximately 84,000 lbs*
Cube - approximately 11,000 ft^3*

* Includes organic ground transportation

4. RESPONSIBILITIES

a. Chief of Naval Operations (OPNAV N931)

(1) Serve as resource sponsor.

(2) Develop FDPMU policy and program executive guidance.

(3) Validate requirements for deployment of a FDPMU (in coordination with supported command and BUMED).

(4) Task BUMED for appropriate actions.

b. Chief, Bureau of Medicine and Surgery (BUMED)

(1) Establish FDPMU as a mobilization platform in Total Force Manpower Management System (TFMMS).

(2) Provide resources to support FDPMU training requirements.

(3) On order, task NAVMED Support command to deploy FDPMU team(s).

c. Navy Medicine Support Command

(1) Task NEHC to deploy FDPMU team.

(2) Task NEMSCOM to deploy FDPMU equipment sets.

d. Navy Environmental Health Center (NEHC)

(1) Assign FDPMU Program Manager.

(2) Plan, supervise, organize, train, equip and maintain FDPMUs.

(3) Coordinate with NAVMEDLOGCOM and Navy Expeditionary Medical Support Command (NEMSCOM) for procurement of FDPMU AMAL.

(4) Appoint FDPMU OIC in consultation with Field Activity OICs.

(5) On order, deploy assigned FDPMU teams.

(6) Coordinate with NEPMU and FDPMU OIC on deployment specific details.

(7) Track deployed units, recommend budget needs and priorities to OPNAV N931 via BUMED.

(8) Gather and disseminate lessons learned for continued improvements and transformation.

e. Navy Environmental and Preventive Medicine Unit (NEPMU)

(1) Staff, manage, and train FDPMU teams.

(2) Provide long- and short-range FDPMU training plan to NEHC.

(3) Report periodic deployment readiness to NEHC.

(4) Nominate FDPMU OICs to NEHC.

f. Forward Deployable Preventive Medicine Unit (FDPMU)

(1) OICs serve as the coordinator for deployed mission execution.

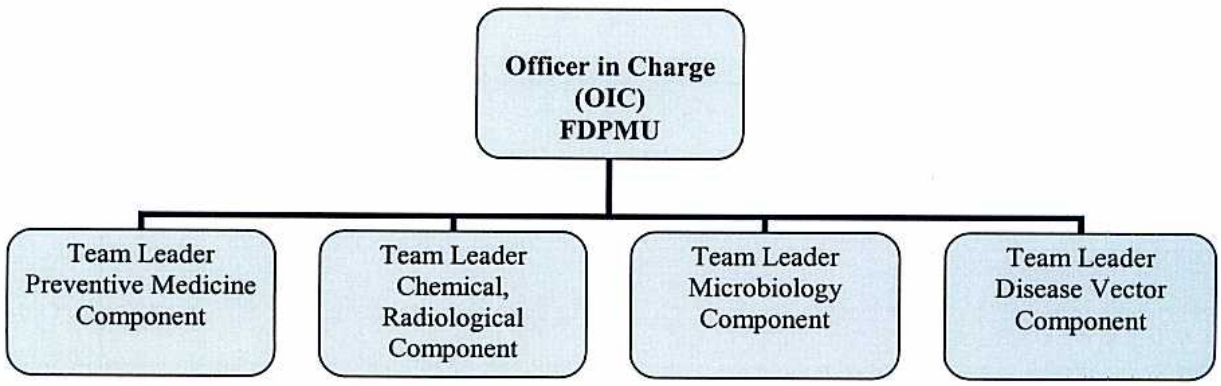
(2) Provide routine and periodic status reports to TACON (tactical control) and OPCON (operational control).

(3) Follow requirements for Environmental Health Site Assessment (EHSA) Work Plans – submit draft copy of work plan to NEHC for approval prior to initiating work or submitting final work plan to theater commander.

(4) Submit timely lessons learned (LLs) and After Action Reports (AARs).

5. FUNCTIONS

a. FDPMU teams are functionally organized to provide the appropriate level of response and technical augmentation to military authorities. FDPMUs are structured to provide the Operational Commander with capabilities in the following major functional areas:



(1) **Preventive Medicine Component** – Provides expert preventive medicine consultation to prevent or limit impact of disease outbreaks through field sanitation expertise and assessment, epidemiological investigation of disease outbreaks, and theater surveillance data analysis and recommends interventions for prevention and control of deployment-related occupational and environmental illnesses, injuries, and diseases. Sub-functions include:

(a) Health Risk Assessment/Disease Control Measures. Evaluates potential risks to force health (both short- and long-term) and readiness in the AOR, prioritizes them according to severity and likelihood, and recommends actions to minimize the risk.

(b) Disease and Non-battle Injury (DNBI) Analysis. Analyzes and provides consultation on reported DNBI data across all component commands assigned to the JTF.

(c) Host Nation Population Assessment. Interprets data concerning the health of host nation/indigenous populations as needed to support mission requirements.

(d) Coordinates with the civil-military operations center (CMOC). Advises the JTF Commander on relevant aspects of local population health, urgent needs, and requirements for satisfying those needs, locally available assets, critical assets not available locally.

(e) Theater-wide Potable Water Analysis, Field Sanitation and Food Safety Consultation. The component is staffed with members possessing extensive knowledge of infectious disease surveillance techniques and procedures as well as the component's state-of-the-art water testing equipment suite:

1. 1 Preventive Medicine Officer

2. 1 Environmental Health Officer

3. 2 Preventive Medicine Technicians

(f) Specialized equipment available to the component for conducting drinking water quality analysis includes:

1. HACH DR 5000 Spectrophotometer (quantification of inorganic compounds in water).

2. IDEXX Colilert® (detection of total coliform and E-coli).

3. Inficon HAPSITE® for volatile organic compounds (VOC) in water (calibration curves exist for 60 VOC compounds). Additional methods and calibration curves are under development.

(2) **Chemical Component** - Serves as an area-wide consultant and provides reach back capabilities to reference laboratories or experts for chemical and environmental agent-related information. Evaluates potential occupational health and safety risks to force health (both short- and long-term) and readiness in the AOR, prioritizes them according to severity and likelihood. Provides recommendations to minimize the risk to the Combatant Commander. Sub-functions include:

(a) Chemical Warfare (CW) Agent Detection and Identification: Provides capabilities for assessment and identification of CW agents and exposures during deployments. In addition, provides risk assessment and recommendations on potential threats based on current intelligence.

(b) TICs/TIMs: Identifies and quantifies potential exposures to hazardous materials as a preventive measure and makes recommendations to eliminate or minimize personnel exposure to these hazards.

(c) Sampling: Conducts area wide sampling of air, soil and water for risk characterization.

(d) The component is staffed with members possessing extensive knowledge of the component's state-of-the-art, highly advanced, and technical direct reading and field portable analytical instruments required in assessment of potential CW and environmental hazards:

1. 1 Industrial Hygiene Officer

2. 2 Preventive Medicine Technicians

3. 1 Biochemist - *available as augmentee only*

(e) Specialized direct reading and field portable analytical instruments available to the component for assessment of potential CW agents and environmental hazards include:

1. Inficon HAPSITE® portable Gas Chromatograph/ Mass Spectrometer (GC/MS) detects and compares results against the National Institute of Standards and Technology (NIST) library of 180,000 volatile organic compounds and the Automated Mass Spectral Deconvolution and Identification System (AMDIS) library of 1300 compounds, including chemical warfare agents (CWA) precursors and TIC/TIM. The HAPSITE® detects, identifies and quantifies low level target nerve/blister agents and 127 selected TIC/TIM in its current state of optimization.

2. SensIR HAZMAT *ID*® Fourier Transform Infrared Spectrometer (FT-IR) identifies solids and liquids including nerve and blister agents, CWA precursors, a large library of TICs, white powders and explosives.

3. RAE Systems Multi-RAE Plus as a combination photo-ionization & multi-gas detector.

4. Airmetrics Mini-Vol Portable Air Sampler for particulate and integrated gas sampling.

5. Other assorted direct reading instruments, detector tubes, and sampling equipment.

(3) **Radiological Subcomponent** - Provides the ability to assess and identify radioactive materials and advises the JTF Commander of the hazard level and recommends counter measures. It provides consultation in the establishment of an environmental dosimetry surveillance program and associated protective measures.

(a) Radiological capabilities are considered a subcomponent of the larger chemical component and as such, are usually staffed with the chemical component Industrial Hygiene Officer. When mission dictates, it can be augmented by a Radiation Health Officer.

(b) Portable Radiological Survey equipment, including the ThermoElectron IdentiFinder, (formerly known as the BICRON fieldSPEC), field gamma detector with spectrum analysis and library, and Eberline E-600 multifunction RADIAC for Alpha, Beta, and Gamma detection. STAPLEX high volume air samplers for particulate collection are available to the chemical component team leader for addressing potential radiation hazards.

(4) **Microbiology Component** – Provides capabilities for detection, identification, and analysis of naturally occurring infections and BW agents that may be encountered during deployments, as well as laboratory diagnosis of militarily relevant infectious diseases endemic within the theater. It serves as the local JTF commander's subject matter expert on matters regarding infectious disease and BW agents and provides laboratory support for in-theater infectious disease outbreak investigations as well as capability for processing and analyzing potentially dangerous infectious specimens.

(a) The component is staffed with graduates of the Navy's Biological Defense Research Directorate (BDRD) three-week Biological Warfare Detection course that provides intensive didactic and theory-based training, as well as practical application of Hand-held Assays (HHAs), Enzyme Linked Immunosorbent Assay (ELISA) and polymerase chain reaction (PCR) technology:

1. 1 Microbiologist

2. 1 Medical Laboratory Technician

3. 1 Biochemist - *available as augmentee only*

(b) Field analytical equipment available for the microbiology component includes:

1. The Ruggedized Advanced Pathogen Identification Device (RAPID) for conducting PCR detection and identification of BW/BT. Additionally, the component deploys with a battery of HHAs for performing onsite presumptive agent identification.

2. ELISA sample and specimen analysis for various pathogen detection and identification, including BW/BT agents as well as complete culture and identification, smear and staining (both classical and immunological), antibiotic sensitivity and serologic testing capability for clinical specimens, foodstuff and environmental samples to support disease outbreak investigation and environmental risk assessment.

(5) **Disease Vector Component** – Provides strategies and programs to protect deployed forces from vector-borne diseases, including surveillance and control of insects and animals that transmit diseases of military relevance. It does so through the collection and identification of specimens that may be suspected of transmitting, or playing a role in the transmission of disease pathogens during a disease outbreak. The Disease Vector Component determines the potential threat of vector-borne diseases in an area of responsibility (AOR) and conducts operations to control or minimize these threats.

(a) The component is staffed with members possessing extensive background expertise in field vector surveillance and control procedures:

1. 1 Entomologist

2. 1 Preventive Medicine Technician

(b) An assortment of handheld pest control sprayers and vehicle mounted ultra low volume (ULV) and hydraulic generators for pesticide dispersal operations are available within the component equipment inventory along with broad spectrum vector surveillance and identification tools.

(6) **Logistics Support Module** – Provides the necessary planning and coordination infrastructure through BOS to support the administrative, communication, and lift requirements of each primary component during pre-deployment, deployment, and post-deployment operations. Coordinates with BOS for the shipment of theater-wide samples and specimens collected by the team and as directed, serves as the focal point for team hazardous material movement in and out of theater. This support module is inherent to FDPMU capabilities and cannot be deployed independently.

(a) Staffed with members possessing extensive training in load planning and airlift requirements. They are also well versed in FDPMU environmental control issues, electrical load and field set-up requirements:

1. 1 General Duty Corpsman

2. 1 Preventive Medicine Technician - *primary assignment is to the Disease Vector Component*

6. ADMINISTRATION

a. Duration of Deployment: Teams are best utilized for short-term deployments. Based on the level of BOS support and re-supply requirements, teams can remain deployed up to 179 days.

b. Deployment Orders: FDPMU members will utilize NAVPERS Form 1320/16 for deployments. The "Additional Comments and Instructions" section, Block 21, should address the following:

(1) Personnel authorized to travel in civilian attire.

(2) Personnel are authorized excess baggage.

(3) Variations as authorized.

(4) Personnel authorized to carry weapons.

(5) Chem/Bio/TIC/Explosive residual on clothing and baggage.

c. Backfill for Deployed FDPMU Members: Although not routinely required, select reserve backfill or equivalent resources may be necessary to meet mission requirements for enhanced team composition.

d. Medical Force Protection: All required immunizations and force medical protection actions shall be completed prior to executing any FDPMU mission. A properly completed pre-deployment medical screening will be performed prior to executing any FDPMU mission. A detailed preventive medicine pre-deployment brief will be provided to all deploying personnel on potential disease threats / environmental hazards, along with required preventive medicine counter measures for personal protection. Ensure that post-deployment health assessments are performed for team personnel as required.

e. Meals/Lodging: Team members will receive US Government designated per diem rates for the operational area. Members will attempt to procure locally available civil or military contracted quarters, rations and subsistence. Field rations (Meals Ready to Eat) should be the basis of meals in austere locations.

f. Uniform and Equipment:

(1) Deployment/Redeployment Uniform Common to All: Civilian attire is authorized when using commercial conveyance.

(2) Employment Uniform Common to All: AOR specific battle dress uniforms (BDUs).

g. Hazardous Cargo: Team deployment sets will meet all US Navy, US Air Force, National Transportation Safety Board (NTSB) and Department of Transportation (DOT) hazardous cargo, stencil, and briefing requirements.

h. FDPMU Equipment: FDPMU will deploy with portable equipment and supply AMALs using commercial backpacks, pelican-style cases and ruggedized containers. All equipment meets commercial airframe size, weight and cube requirements.

i. Sustainment: FDPMU arrives with 5 days sustenance and 30 days consumable supplies for sustaining laboratory and support operations. Follow-on, 30-day consumable push-packs are available for up to 120 days.

7. LIMITATIONS AND SUPPORT REQUIREMENTS

a. Pre-deployment Support Requirements. The FDPMU is limited to 5 days sustenance and 30 days consumable supplies for sustaining laboratory and support operations. Follow-on 30 day push-packs of consumables are available for up to 120 days or until the SIMLM is functional.

(1) The Medical Planner must consider other FDPMU limitations as well when coordinating pre-deployment issues. The FDPMU requires:

1. Transport Lift Support – The unit requires lift support. It is mobile, flexible in design to meet the response needs of the theater commander and if provided with rapid transportation lift support, the unit can be fully operational within 12 hours of site off-load.

2. TPFDD Requirements - The unit relies upon Time-Phased Force and Deployment Data (TPFDD) implementation to ensure team movement requirements are met.

b. In-theater Support Requirements. The FDPMU requires BOS once established on the ground in order to deliver all unit capabilities and meet the theater commander's full mission expectations. Specifically, the FDPMU requires:

(1) Medical and dental care and full access to messing facilities.

(2) Security and EOD support in the combat environment.

(3) Responsive logistics support for consumable re-supply and cold chain management.

(4) Sample Shipment Capability - The unit requires air and ground transportation to ship and receive samples and specimens collected from the theater of operation.

(5) Reagent Quality Water - The unit is dependent upon in-theater reagent quality water for analytical equipment analysis.

(6) Fork lift ground support for equipment movement.

(7) Armory support and ammunition for M9 service pistols.

(8) Petroleum, Oil, and Lubricants (POL) allocations.

1. Diesel fuel (20 gallons per day) for each organic unit vehicle

2. JP fuel (20 gallons per day/generator) for three, 35KW portable generators

(9) Intact Communications - The unit requires intact communication lines for both in-theater operations and connecting back to CONUS. Reporting requirements will be followed in accordance with the DEPORD or Operations Order (OPORD). Team to team communication frequencies for hand held radios operating in two bandwidths, 13.5 kHz and 25.0 channel spacing are also required.

8. REFERENCES

a. DOL (Department of Labor) Code of Federal Regulations (CFR), 29 CFR 1910

b. DOD Directive (DOD-D) 6490.2, Comprehensive Medical Surveillance

c. DOD Instruction (DOD-I) 6490.3, Implementation and Application of Joint Medical Surveillance for Deployments

d. National Response Plan, Department of Homeland Security, December 2004

e. Presidential Decision Directive 39 (PDD-39), U. S. Policy on Counterterrorism

f. Title X of Public Law (PL) 105-85

g. DOD Strategy for Homeland Defense and Civil Support, June 2005

h. OPNAVINST 3501.347, Projected Operational Environment (POE) and Required operational Capability (ROC) for the Navy Forward Deployable Preventive Medicine Unit (FDPMU)

i. BUMED Instruction 6440.6, Mobile Medical Augmentation Readiness Teams (MMART)

j. USACHPPM TG 230, Chemical Exposure Guidelines for Deployed Military Personnel

k. NEHC-TM 6250.1, Navy Medical Department Pocket Guide to Malaria Prevention and Control

l. NEHC-TM 6290.91-2B, Industrial Hygiene Field Operations Manual

m. NEHC-TM 6490.00-1, Implementing Guidance for Deployment Health Surveillance

n. NEHC SOP for Environmental Health Site Assessments

o. NEHC SOP for Screening Risk Assessment on Potential Sources of Potable Water

p. NAVMED P-5010, Manual of Naval Preventive Medicine

q. ASTM E 2318-03, Standard Guide for the Environmental Health Site Assessment Process for Military Deployments